

CLAIM AMENDMENTS

Claims 1 - 8 (cancelled).

1 9. (currently amended) An apparatus for liberating
2 oxygen isotopes from an oxygen-containing solids comprising:
3 a vacuum-tight quartz glass housing;
4 a graphite crucible and in said housing an induction
5 heating source in said housing capable of heating an oxygen-
6 containing solid in said crucible to a temperature at which oxygen
7 in said solids react with carbon of said crucible to form CO or
8 CO₂; and
9 a vacuum pump connected to said housing.

Claim 10 (cancelled).

1 11. (Previously presented) The apparatus according to
2 claim 9 which comprises means for capturing gaseous CO or CO₂
3 arising from the induction heating of the solids in said crucible.

1 12. (currently amended) The apparatus according to
2 claim 10 9 wherein the housing of quartz glass is provided with
3 means for cooling the housing.

4 13. (currently amended) The apparatus according to
5 claim 10 9 wherein the housing of quartz glass can be opened on
6 opposite sides to replace the solid and the graphite crucible
7 containing the solid.

1 14. (currently amended) The apparatus according to
2 claims 13 wherein the graphite crucible is elongated whereby at and
3 has an upper end and a lower end said lower end being provided with
4 a cavity is provided which can receive a rod with which the
5 graphite cuvette can be mounted in, the housing.

Claims 15 to 17, (cancelled).

1 18. (currently amended) An apparatus for liberating
2 oxygen isotopes from a solid, comprising:
3 an elongated quartz-glass evacuable vacuum-tight
4 housing connectable to a vacuum pump and having an outlet;
5 an elongated graphite crucible having a cavity at one end
6 and a bore at an opposite end, said cavity receiving a sample of
7 said solid;

8 a rod received in said bore for inserting said crucible
9 into said housing and positioning said cuvette in said housing;
10 a cooling jacket surrounding said housing and provided
11 with an inlet and an outlet for passing a cooling liquid through
12 said jacket;

13 an induction coil surrounding said housing for induction
14 heating of said crucible and said solid to gradually raise a
15 temperature of said solid to initially drive impurities therefrom
16 and then decompose said solid to liberate oxygen therefrom whereby
17 said oxygen combines with graphite carbon to form a gas comprising
18 carbon oxides; and

19 a duct for admitting a carrier gas to said housing
20 whereby said gas containing oxygen liberated from said solid ~~carbon~~
21 oxides is entrained in said carrier gas through said outlet to a
22 spectrometer for isotope analysis.